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ABSTRACT

This speech is based on a theory earlier proposed by the author that orthographic presentation of English is much like the abstract base of language which an individual uses in forming strategies for reading. Thus, his ability to read depends upon his facility with his language. An important implication for schools is that, given this theory, all children should be able to learn to read fairly quickly provided either that they have language facility equal to that of the materials they are asked to read or that the materials are made representative of the dialect they speak. It is suggested, then, that reading materials be written for individual children, perhaps with the aid of computers, and that oral reading, because it allows children to hear what they read, should have a prominent place in the early reading of children. References are included. (MS)

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Implications of a Theory of Reading

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In a recent issue of a research quarterly in Reading (3), I have proposed an information-processing type model of the reading process as a whole. Under the hypothesis that language has an abstract genetic base, a model is developed that heavily depends upon recent work in phonology by Chomsky and Halle (5). In particular, it is proposed that the abstract base forms for lexical items bear a remarkable resemblance to the orthographic representation of English, and that the native speaker of the language makes extensive use of his knowledge of these forms in developing efficient strategies for reading. Specifically, it is suggested that an acceptable oral rendering of a passage involves greater syntactic and semantic understanding than is presently thought to be the case. The model makes the assumption of normal oral language development and proposes that analysis-by-synthesis processing of articulatory coding provides considerable insight into how children begin to read. The central process of reading

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is a relatively simple transition from orthography to an abstract articulatory feature representation in STM (short term memory). In other words, learning to read ought not to be a particularly difficult task for the essentially normal child if the language is appropriate to his present level of competency in a particular dialect.

In more recently completed research (4), following the work of Goldman-Eisler (6) and others who have suggested that pause time may act as an important structural clue in the encoding and decoding of speech, I have demonstrated that 65% of the pause time variance in a competent oral reading performance can be predicted from both surface and deep structure analyses of the textual material. Interestingly enough both levels of analysis are necessary for this predictive equation. These results clearly support the Chomsky-Halle hypothesis that an acceptable oral reading is dependent upon an understanding of the derived surface structure of the passage read. The syntactic variables of this experiment were successful in not only predicting the occasion of pause, but also pause duration, thus supporting the presumption that the distribution of pause time in oral reading is largely predictive of underlying and derived grammatical organization.

If the transition from orthography to the abstract feature representation S is as straightforward and direct as it appears to be for the individual who knows the sound pattern of English, how do we account for reading difficulties in otherwise intelligent children. There are four kinds of problems I will mention here; they can be characterized as: a) peripheral, b) neurological or specific, c) cultural, and d) developmental. Together they comprise the main body of impediments I would want to associate with reading.

Peripheral difficulties can be quickly dismissed as those physiological problems of inadequate vision or hearing that are quickly diagnosed as such by a competent reading clinician. Neurological or specific reading disabilities refer to those few problem readers for whom no functional problem can be detected. Rather, the cause may lie in diagnosed brain damage, or in the absence of such evidence, a lack of visual or auditory memory, little or no directional sense, or the phenomenon of delayed or backward speech (see Donald Shankweiler's discussion in Kavanagh's (Ed.), 1968, The Reading Process, pp. 202-04). All of these neurological symptoms have fallen under the general heading of dyslexia, and they all indicate some disturbance in the perceptual or visual-auditory link. At some place in the first few steps of the reading process, the relatively direct transition from text to S malfunctions and the print is never recognized as language capable of interpretation. Remedial action for these problems is presently a bafflement, and probably will continue to be so for some time.

Cultural problems are those difficulties peculiar to reading populations where the individual is not only attempting to read,but also must attend to the problem of trying to understand a written dialect that is quite different from his own. This is not simply a question of the so-called differences between written and spoken English, nor is it concerned with minor dialect differences in the phonetic rendering of the same underlying base forms of words; rather, it refers to the intrusion of one culture upon another, where the semantic and structural space of the spoken "dialect" is so different from Standard English, its cultural roots so uniquely its own, that we may indeed find that the underlying base forms are distinct from other English dialects (see Baratz and Shuy, 1969). If this is the case -- and it appears to be so in many inner-city

schools -- then beginning reading will present enormous problems for the child attempting to read what appears to be a dialect not unlike his own, but which in reality is profoundly different at every level.

Finally, there are those difficulties associated with oral language development. Knowledge of the sound pattern or phonological rules of English depends not only upon developmental sequencing, but also upon the availability of evidence. If the child is attempting to read a vocabulary that is greater than or different from his own, then he is again confusedly trying to accomplish two things at once. The dialect may be his own, but he is unable to integrate these new terms with his phonological system. So instead of the child beginning to translate or decode his own language, he learns to read textbook simple declaratives using concepts or vocabulary he will learn while reading. Why should conceptual growth or vocabulary development have anything to do with "learning" to read? Meaning or interpretation aside, it more importantly confuses the child's phonological system.

Specifically, it seems to me that we have two choices in teaching children to read. We can either delay the introduction of reading until the child's vocabulary and oral language development are in line with the expectations of school and textbook language, or we can teach the child to read the language he knows. If we take the first choice, then the first task in school probably ought to be "oral language development", concept-building, etc., all the activities presently associated with the basal approach to "reading development", however, here divorced from the act of learning to read. Why not read aloud more extensively to children; why not develop all those "listening skills" that are so conspicuous by their absence in literate adults; or why not systematically

exploit the system of understanding, inference, and interpretation, allowing children to really interact with this expanded and revised dialect through playlets, conversation, and oral interpretation. In other words, let them know the language before they must read it.

The second choice of reading activities would require rather specific knowledge of the language or dialect(s) of the children about to begin reading. What is the structure of their lexicon, and with what phonological and syntactic rules are they competent? These are areas which require considerable research that is yet to be forthcoming for many dialects. For example, how do children's phonological rules and methods of representation change with development over time, within <u>one particular dialect</u>? If we also want to emphasize the alphabetic principles of the language, then we will want to begin with those letter patterns of syllables and words that are "regular" for this child's knowledge of his dialect. That is, we may choose to begin with those words or syllables from words where there is minimal change from the underlying base form to the phonetic rendering in the dialect. Such a thoroughgoing analysis and systematic presentation of the "regularities" in Standard English at the phonemic level was devised by Leonard Bloomfield (2), the great American linguist, some 35 years ago. Needless to say, it did not meet with instant success and was finally published in 1961 by Wayne State Press. May I add that to my mind it remains the best single book on teaching children to read their own dialect, and that most of what I have said is derivative of his insight into the problem.

He, too, thought there should be no great difficulty in learning to read, if reading and language problems were understood as related but distinct. The transition process from written to oral language that the child knows, should

be mastered in a matter of months no matter how badly taught or with whatever learning principles in mind. Every normal child comes to school with well-developed oral language; the problem of accessing that language orthographically should be a straightforward task if based upon alphabetic principles and the notion that "regularities" in this decoding process should be presented in a systematic fashion. Given time and attention, any normal child should learn to read the language he knows. It is a rote process which only requires the proper selection of material and some kind of internal comparison for the child as to the acceptability of his rendering -- altogether a task admirably suited to the long awaited use of computer-aided instruction; as I believe most teachers, besides finding the task extremely repetitious, even with knowledge of a child's dialect would be overly critical in their acceptance of his rendering. If the child later is encouraged to understand what he has read, that is all well and good, as we hope he will learn to understand all that we tell him as well. But to ask him to attempt both in the early stages of reading is to divert his attention from the principle task at hand -- learning to read. In a remarkable display of flexibility most children learn to read no matter what method is invoked, but not without considerable confusion and effort, and not without, in many cases, considerable loss of self-respect and confidence. Nothing is perhaps more disquieting than the spectacle of a teen-aged boy who is finally learning to read, but at a point where the school process, with its fundamental premise of literacy, has passed him by. Or perhaps from my own experience, to learn that the first grade instructor of my son has, by the third week of school, established four reading groups "to meet their individual needs", and promises many of the parents that their children will not "learn" to read this year be-

cause they lack the necessary background of language experience in the home. What has become of the democratic ideal in our public schools, that all children have the right to learn to read?

Finally, if I seem to unduly emphasize the role of oral reading in the beginning steps of acquisition -- its importance to further processing, its role as indicator of understood structure, its realization as subvocalization which should not be discouraged -- I do not mean that we should return full circle to the exclusive interest in reading aloud that characterized instruction at the turn of the century. Thorndike in 1917 knew the fallacies in this approach when he wrote:

> "In school practice it appears likely that exercises in silent reading to find the answers to given questions, or to give a summary of the matter read, or to list the questions which it answers, should in large measure replace oral reading. The vice of the poor reader is to say the words to himself without actively making judgments concerning what they reveal. Reading aloud or listening to one reading aloud may leave this vice unaltered or even encouraged (8, p.332)."

In a sense, the history of reading education since that time has taken Thorndike's recommendations to heart, but in the process there has developed considerable confusion over what is reading and what is language development. Children were taught to "read for meaning" from their very first contact with print, and consequently were taught to do several things at once, as a mature reader might do. To read a passage is one achievement, to understand what one has read is another, based upon adequate attainment of the first.

One of the most vexing problems that has resulted from this great emphasis on silent, "meaningful" reading, is the lack of accuracy one detects in the

reading of students in learning situations. Closer inspection of their reading (learning) problems reveals that they simply cannot be faithful to what is on the printed page, because they are sampling the text in a haphazard fashion and guessing at many of the key concepts or vocabulary items in the passage. How to promote accuracy in reading seems to me one of the essential problems as children begin to read. The whole area of the decision process as to what will be acceptable as a generated match ought to be a very fruitful line of investigation. And finally, in the area of testing, I fear all tests of reading efficiency and retention are doomed as measures of the underlying reading process. Better that we move to something as simple as the "cloze" or word deletion test, before we accept reading comprehension evaluations as indicative of a child's reading competency.

Every child has the right to learn to read. If he is normal, can speak and listen, has no serious physiological or neurological problems, he can "learn" to read the language that he knows in a relatively short period of instruction. The child has the right to expect that of us. If we fail him, then we have only ourselves to blame.

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